a sensor for detecting at least one parameter of displacement of said fabricating system and producing a signal in response thereto; and

a circuit in electrical communication with said actuator assembly and said sensor;

wherein, upon the detection of said at least one parameter of displacement by said sensor, said sensor signals said circuit, which, in response, activates said actuator assembly to control vibration.

Q2

4. (Amended) The vibration control system of claim 1, said actuator assembly comprising

(a) an electroactive element;

(b) a conductor; and

(c) an insulator;

wherein said electroactive element, said conductor, and said insulator are bonded together such that in-plane strain in said electroactive element is shear-coupled between said electroactive element and said insulator.

Q3

11. (Amended) The vibration control system of claim [11] 1, wherein said actuator assembly controls vibration of the fabricating system thereby increasing the accuracy of the system for fabricating electronic components.

Q4

19. (Amended) The vibration control system of claim 15, wherein said fabricating system [comprising a component] comprises a part selected from a group consisting of a step motor, a DC motor, a hydraulic actuator, and a pneumatic actuator, and wherein said vibration is caused by said [component] part.

Q5

23. (Amended) The vibration control system of claim 22, wherein said signal from said controller relates to linear displacement, auto-tuning, gain scheduling, external gain control, feed forward control, adaptive control, or feed back control.

24. (Amended) A method of controlling a vibration in a gantry, the method comprising the steps of:

(a) bonding the actuator assembly of the vibration control system of claim 4 such that the [system] actuator assembly is shear-coupled to said gantry, and such that in-plane strain of the electroactive element mechanically acts on the gantry through said insulator when an electrical signal is applied to said conductor; and

(b) applying an electrical signal to said conductor.

--27. (New) The vibration control system of claim 10, wherein said actuator assembly controls vibration of the fabricating system, thereby increasing the accuracy of the system for fabricating electronic components.

28. (New) A vibration control system for use with a fabricating system, said vibration control system comprising:

an actuator assembly for controlling vibration;

a sensor for detecting at least one parameter of displacement of a unitary part of said fabricating system and producing a signal in response thereto; and

a circuit in electrical communication with said actuator assembly and said sensor;

wherein, upon the detection of said at least one parameter of displacement by said sensor, said sensor signals said circuit, which, in response, activates said actuator assembly to control vibration.

29. (New) A vibration control system for use with a fabricating system having a motor, said vibration control system comprising:

an actuator assembly for controlling vibration;

a sensor for detecting a signal from the motor; and

a circuit in electrical communication with said actuator assembly and said sensor;

wherein, upon the detection of said signal from the motor by said sensor, said sensor signals said circuit, which, in response, activates said actuator assembly to control vibration.

30. (New) The vibration control system of claim 16, wherein said actuator assembly controls vibration in said support structure.

31. (New) A vibration control system for use with a fabricating system having a support structure, said vibration control system comprising:

an actuator assembly for controlling vibration;

a sensor for detecting at least one parameter of displacement of said fabricating system and producing a signal in response thereto; and

a circuit in electrical communication with said actuator assembly and said sensor;

wherein, upon the detection of said at least one parameter of displacement by said sensor, said sensor signals said circuit, which, in response, activates said actuator assembly to control vibration in said support structure.

32. (New) The fabricating system of claim 31, wherein said support structure supports a unitary part selected from the group consisting of a lens, a stage, and a gantry.

33. (New) A method of increasing the accuracy of a stage alignment in a system for fabricating electronic components, said method comprising the steps of

(a) bonding the actuator assembly of the vibration control system of claim 4 such that the actuator assembly is shear-coupled to a unitary part of the system for fabricating electronic components, and such that in-plane strain of the electroactive element mechanically acts on the part through said insulator when an electrical signal is applied to said conductor; and

(b) applying an electrical signal to said conductor.

34. (New) The method of claim 33, wherein said system for fabricating electronic components comprises a lens assembly, a wafer stage, and a support structure for supporting the lens assembly and the wafer stage.

35. (New) The method of claim 33, wherein said unitary part of said system for fabricating electronic components is selected from the group consisting of a lens assembly, a wafer stage, and a support structure for supporting the lens assembly and the wafer stage.

36. (New) A fabricating system comprising:

an actuator assembly for controlling vibration;

a sensor for detecting at least one parameter of displacement of said fabricating system and producing a signal in response thereto; and

a circuit in electrical communication with said actuator assembly and said sensor;

wherein, upon the detection of said at least one parameter of displacement by said sensor, said sensor signals said circuit, which, in response, activates said actuator assembly to control vibration.

37. (New) The fabricating system of claim 36, further comprising a control system having at least one controller that produces a signal, and which is in electrical communication with said circuit, and wherein said circuit activates said actuator assembly in response to said signal from the controller.

38. (New) The vibration control system of claim 28, said actuator assembly comprising an actuator selected from the group consisting of a strain actuator, and electroactive strain actuator, a piezoceramic strain actuator, and an electroactive stack actuator.